



GEOSPATIAL BLUEPRINT

Geospatial data and information describe geographical locations and characteristics and are used to monitor and assess environmental conditions and trends –for air, land, and water, and public health – at national, regional, State, and local levels. This locational data, when used with tools such as geographic information systems (GIS), enable EPA to integrate, analyze, and present various types of data (e.g., air, water, land and toxics) in meaningful ways for specific locations. The use of locational data and technologies can significantly improve EPA’s understanding of environmental interactions, health effects, and environmental performance, enable innovative approaches not previously possible, and create efficiencies that save resources.

Geospatial Blueprint Vision

EPA will improve the protection of the environment and public health through the efficient and effective use of geospatial data and technologies to conduct business.

Purpose

The *Geospatial Blueprint* provides the plan for coordinating and enhancing geospatial resources across the Agency and eliminating stove-piped, cost-intensive efforts to generate and utilize geospatial data and tools. The *Blueprint* proposes a comprehensive, coordinated, and collaborative approach to the acquisition, management, and use of geospatial data and tools to support Agency business. Developed by an Agency-wide team, the *Blueprint* envisions a future in which analyzing and understanding the geographical context of diverse EPA business areas can be easily accomplished using Geospatial WebServices available on all EPA desktops.

Background

The *Blueprint* strategy is built around the same five framework themes used to develop EPA’s Enterprise Architecture (EA): Business Processes, Data Architecture, Application Architecture, Technology Architecture, and Governance. The *Blueprint* effort has been conducted in tandem with the Enterprise Architecture and recommendations from the *Blueprint* are being incorporated into the EA. As a result, the *Blueprint* has identified 5 goals that will enable the Agency to consolidate and refine the current geospatial landscape to take advantage of emerging technologies. This will position the Agency to utilize Internet services for the discovery and delivery of geographic data and tools both internally and with partners.

Goals of the Geospatial Blueprint

- Incorporate location-based approaches, data, and tools into EPA business processes for improved decision-making.
- Provide EPA staff, partners, and public with geospatial data they need to do their business and make decisions.
- Provide tools and training to access, use, and analyze geospatial data.
- Enhance EPA’s technical infrastructure to support seamless access, use, and delivery of distributed geospatial data, tools, and Web-based services.
- Institute a process to set priorities, coordinate efforts, and track and communicate how data and technologies are being used to support EPA’s mission.

Activities

To achieve the vision and goals, the *Blueprint* details the objectives and important actions and associated milestones for optimally using geospatial data and technologies to support the EPA mission of protecting human health and the environment.

Agency-wide teams are currently working to:

- Hire a Geospatial Information Officer to oversee the implementation of this *Blueprint* and serve as a focal point for geospatial activities with internal and external partners.
- Design the target geospatial component of the EPA Enterprise Architecture so it integrates with other critical components of the EA such as the Central Data Exchange, Enterprise Repository and Registries, and System of Access.
- Improve and simplify the exchange and sharing of data and applications by developing a Geospatial Data Index and a variety of geospatial Web services.
- Develop a variety of geospatial data standards and transmittal (e.g., XML, GML) standards with Federal and State partners.
- Develop a proposed Geospatial Program Governance structure to oversee the implementation of the *Blueprint* and Program.
- Ensure that EPA geospatial activities integrate with Geospatial One-Stop and other e-gov initiatives.

Achievements

Implementing the *Geospatial Blueprint* will position EPA to:

- Integrate and analyze information based on quality locational information in support of business operations within and across EPA Programs.
- Analyze environmental problems and design solutions more holistically and innovatively.
- Decrease the time necessary to develop tools for responding to emergency situations.
- Find and use geospatial data in an easy and timely manner.
- Share geospatial data, applications, and products within EPA and with all partners through Web-based GeoServices and open standards.
- Increase geospatial operational efficiencies, reduce duplication, and decrease costs to individual programs and the enterprise as a whole.
- Effectively set priorities for strategic activities and investments through enterprise governance.

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